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Werner Scheltjens

ENS-LSH, Lyon

14. June 2009

Online at <http://mpra.ub.uni-muenchen.de/17168/>

MPRA Paper No. 17168, posted 8. September 2009 08:58 UTC

New routines, growing interference and operational efficiency gains: the influence of Czar Peter the Great's economic policy on Dutch maritime shipping with Russia, 1709-1724

Werner Scheltjens, Université de Lyon, ENS-LSH, France

Werner.Scheltjens@ens-lsh.fr

ABSTRACT

This paper is an attempt to analyze how the Dutch shipping and trade system reacted to the profound changes that occurred in Dutch-Russian trade relations in the first two decades of the eighteenth century. It will be substantiated that the changes that occurred had complex underlying causes: it is in fact the combination of far-reaching protectionist measures aimed at the polarization of St. Petersburg, changes in product demand in the Netherlands and the weakened position of Dutch maritime shipping as opposed to its direct competitors (primarily English shipping). In this paper, the primary focus will be on the effects of the polarization of St. Petersburg. It will be argued that Czar Peter the Great's foreign and domestic economic policies led to the emergence of new routines, the abandonment of the traditional Archangel route, growing interference between nearby destinations in the eastern part of the Gulf of Finland and operational efficiency gains in goods transportation to and from Russia. The paper challenges the traditional view of maritime shipping as a spin-off effect of trade and embraces a more comprehensive analytical point of view that has its foundations in evolutionary economic theory.

INTRODUCTION

In the beginning of the eighteenth century, the existing organizational structure of Dutch maritime shipping in the Gulf of Finland and Archangel suffered from disorder. The political changes that succeeded each other at great pace in the opening years of the eighteenth century caused a shock for Dutch shipping and trade with Russia.

The disturbances of war in the Baltic Sea eventually led to a near monopoly position of Archangel in Dutch-Russian trade in the years 1700-1717. This near monopoly found expression in a continuous positive trend in the number of Dutch ship masters that realized return journeys to Russia's White Sea port¹. Initially, Peter the Great's attempts to promote trade through St. Petersburg instead of Archangel seemed to have had little effect. Only in 1717, a transformation started to take shape. Novgorodian and Pskovian merchants, who back in 1701 were forced to redirect their good streams to Archangel², would play a decisive role in this transformation.

This paper is an attempt to analyze how the Dutch shipping and trade system reacted to the profound changes that occurred in Dutch-Russian trade relations in the first two decades of the eighteenth century. In the first paragraph, I will outline Peter the Great's foreign and domestic economic policies insofar as they had an impact on shipping and trade. In the second paragraph, changes in the Dutch-Russian trade system in the first decades of the eighteenth century will be addressed briefly. The third paragraph contains the analysis of the changing structure of Dutch maritime shipping to Russia in the first decades of the eighteenth century. The analytical focus will be on the years 1718-1724, i.e. following the end of Archangel's monopoly in Dutch-Russian shipping and trade. The third paragraph will cover the abandonment of the Archangel route, the emergence of growing interference between populations of ship masters active of different routes, and the development of a new routine on the St. Petersburg route. Conclusions will complete the paper.

I. RUSSIA'S DOMESTIC AND FOREIGN ECONOMIC POLICY MEASURES

1. *Economic policy in a time of war, 1709-1717*

In 1709, the defeat of the Swedes at Poltava, heralded a new episode in the ongoing Russo-Swedish war. The Russian Empire started to play the upper hand and managed to consolidate its positions around the Baltic Sea. In 1703, the Swedish town Nyen, located in the Neva Estuary, was conquered and demolished. St. Petersburg was founded a few miles further down the Neva, even closer to the Gulf of Finland. In 1704, Narva came under Russian rule. In 1710, Riga and Vyborg were conquered; the Swedes were drawn back from the eastern shores of the Baltic. Almost immediately following the Battle of Poltava, a number of economic-political, administrative and infrastructural reforms was introduced at great pace. Most significant were the foundation of the Senate in 1711 and the declaration of St. Petersburg as the Russian Empire's new capital in 1712³. The Russian Empire's center of power clearly moved towards the Neva estuary.

The Russian Empire's economic policies were directed towards the role of Archangel as opposed to St. Petersburg. As a direct consequence of continuous warfare in the Baltic⁴, trade at Archangel flourished

¹ Werner Scheltjens, *De invloed van ruimtelijke verandering op operationele strategieën in de vroeg-moderne Nederlandse scheepvaart: een case-study over de Nederlandse scheepvaart in de Finse Golf en op Archangel, 1703-1740*, Groningen: Barkhuis Publishing, 2009, pp. 111-131.

² *Polnoe Sobranie Zakonov Rossijskoj Imperii* (abbreviated as PSZ). *Pervaja Serija s 1649 po 12 dekabnja 1825 goda* (sost. pod rukovodstvom M.M. Speranskogo). Sanktpeterburg: [s.n.], 1830, 45 vol., vol. IV, nr. 2387; N.N. Repin, 'Izmenenie ob''ema i struktury ěksporta Archangel'skogo i Peterburgskogo portov v pervoj polovine XVIII v.' // *Promyšlennost' i torgovlja Rossii XVII-XVIII vv.: sbornik statej*, Moskva: Nauka, 1983, p. 178.

³ P.N. Petrov, *Istorija Sankt-Peterburga s osnovija goroda do vvedenija v dejstvie vybornago gorodskago upravljenija po učreždenijam o gubernijach 1703-1782*. Sankt-Peterburg, Tipografija Glazunova, 1885., p. 57.

⁴ J.W. Veluwenkamp, *Archangel: Nederlandse Ondernemers in Rusland 1550-1785*, Amsterdam, Balans, 2000.; N.N. Repin, 'Ot diskriminacii k fritrederstvu: pravitel'stvennaja reglamentacija torgovli čerez Archangel'sk v 20-60-e

like never before in its history. The annual turnover at Archangel rose from 1,5 million rubles in 1704 to 2,3 million rubles in 1717⁵. The number of Dutch ships that called at the port of Archangel would reach its “all-time-high” in 1716, when 89 Dutch ship masters were registered in Amsterdam to join the early and late convoys destined to Archangel⁶. However, already at the end of 1713, Archangel's fall would start. In November 1713, Czar Peter the Great issued a *ukaz* with a number of policy changes to be effective in 1714. This *ukaz* would become the starting point of a long series of laws and regulations with the promotion of St. Petersburg at the expense of Archangel as their main topic⁷.

In the years 1714-1720, several attempts were made to limit exports from Archangel in favor of St. Petersburg, while merchants in Narva retained their rights to carry out trade according to previous Swedish regulations until 1718⁸. In 1714 it was determined that ¼ of all *iufi* produced in Russia had to be transported to St. Petersburg, that merchants had the choice to export hemp from Archangel to St. Petersburg and that other exports had to be carried out via Archangel⁹. The same *ukaz* stated that in 1715 equal quantities of all goods had to be exported from Archangel and St. Petersburg¹⁰. In the following years, the distribution of goods between Archangel and St. Petersburg would be subject to continuous alterations, all of them in favor of St. Petersburg¹¹.

In November 1717, Czar Peter the Great published a new arrangement for 1718: ⅔ of all goods destined for exportation would have to be shipped via St. Petersburg and only ⅓ via Archangel. Merchants from Novgorod and Pskov reacted to the new regulations with a request to allow them to abandon the Archangel route: because of the proximity of St. Petersburg, they no longer saw the need to use it. As this request answered perfectly to the wishes of Peter the Great, it comes as no surprise that they were immediately granted permission. Merchants of Kargopol' on the other hand, who – because of the large distance to St. Petersburg – asked permission to continue sending their goods to Archangel, received a negative answer from the Senate¹².

1718 would be the first year since the foundation of St. Petersburg in which the number of Dutch ship masters that appeared in the eastern part of the Gulf of Finland would be greater than the number of Dutch ship masters active on the Archangel route. The *hausse* of the Archangel route was over. Goods that, until then, would have to be shipped via Archangel, could now also be handled in the Russian ports of the Baltic. Reorientation became inevitable for the Dutch ship masters active in the Archangel trade.

gody XVIII v. i ee rezul'tat' // Ju.N. Bespjatyh (red.), *Archangel'sk v XVIII veke / Arkhangelsk in the XVIII century*, Sankt-Peterburg: Rossijsko-Baltiiskij informacionnyj centr BLIC, 1997, pp. 228-249; Čulkov, *Istoričeskoe opisanie rossijskoj kommercii pri vsech portach i granicach: Ot drevnich vremjan do nyne nastojaščago i vsech preimuščestvennyh zakonov po onoj gosudarja imp. Petra Velikago i nyne blagopolučno carstvujuščej gosudaryni imp. Ekateriny Velikaja*, Sankt-Peterburg, Pri Imp. Akad. nauk, 1781-1788, 7 tomov, tom I, kn. 2, p. 107; Repin, 'Izmenenie', pp. 175-192; N.N. Repin, 'Učastie kupečestva Evropejskogo Severa vo vnešnej trgovle čerez Archangel'sk v pervoj četverti XVIII veka' // *Materialy po istorii Evropejskogo Severa SSSR: Severnyj archeologičeskij sbornik*, vyp. 3, Vologda, 1973, pp. 177-199. A survey of Russian exports from Archangel in the early eighteenth century can be found in P. De Buck, 'De Russische uitvoer uit Archangel naar Amsterdam in het begin van de achttiende eeuw (1703 en 1709)' // *Economisch- en Sociaal-Historisch Jaarboek*, 1988, Vol. 51, pp. 136-142. Dutch maritime shipping with Archangel is reflected in great detail in the so-called 'schipgeldregisters', which are part of the archive of the Directory Board of Muscovite Trade in Amsterdam. See: Stadsarchief Amsterdam (GAA), nr. 6: Archief van de Directie van de Moscovische Handel (DMH), inv.nr. 123.

⁵ Repin, 'Izmenenie', pp. 175-192; Repin, 'Ot diskriminacii k fritrederstvu', pp. 228-249.

⁶ See: 'schipgeldregisters': Stadsarchief Amsterdam (GAA), nr. 6: Archief van de Directie van de Moscovische Handel (DMH), inv.nr. 123.

⁷ Čulkov, *Istoričeskoe opisanie rossijskoj kommercii*, tom I, kn. 2, pp. 55-56.

⁸ Čulkov, *Istoričeskoe opisanie rossijskoj kommercii*, tom V, kn. 2, pp. 100-103; 109; 111-112.

⁹ Repin, 'Izmenenie', p. 181; Čulkov, *Istoričeskoe opisanie rossijskoj kommercii*, tom I, kn. 2, p. 46.

¹⁰ Repin, 'Izmenenie', p. 181; PSZ, V, Nr. 2784.

¹¹ Čulkov, *Istoričeskoe opisanie rossijskoj kommercii*, tom I, kn. 2, p. 61; Repin, 'Izmenenie', p. 181; PSZ, V, Nr. 3051, 3115, 3268.

¹² N.N. Repin, 'Ot diskriminacii k fritrederstvu', p. 231; Čulkov, *Istoričeskoe opisanie rossijskoj kommercii*, tom I, kn. 2, p. 107.



Illustration 1: Map of North-West Russia. Source: Jones, 'Getting the Goods', p. 48.

2. Economic policies before the Peace Treaty of Nystadt, 1718-1721

From 1718 and until the introduction of the new customs tariff in 1724, trade regulations in Narva underwent some fundamental changes, which without exception were inspired by Peter the Great's wish to make St. Petersburg the Russian Empire's main port. On the one hand, the growth of trade via Narva continued to be a matter of concern, but on the other hand, measures were taken to avoid trade in St. Petersburg to be disturbed by Narva¹³.

In the period before the end of the Great Northern War, i.e. until 1721, Russia's economic policy was marked by the continuing existence of state monopolies in the export of potash and tar and of state regulations with regard to strategic products like grain and tobacco, which were subject to change depending on external circumstances¹⁴. A 1718 *ukaz* stated that foreign merchants were obliged to import flax, hemp and *iufi* to Narva, while they also had to make their ships available to local merchants for the exportation of goods abroad¹⁵. Importation of salt was prohibited in 1719¹⁶. Though these measures had the aim of stimulating trade through Narva, they were largely overruled by the more profitable measures that were applied to St. Petersburg. In 1720, Russian merchants sending goods coming from the Russian interior to St. Petersburg were to pay a 3% tax as opposed to 5% if they went elsewhere. If the goods transported to St. Petersburg were exported, the Russian merchants

¹³ Čulkov, *Istoričeskoe opisanie rossijskoj kommercii*, tom V, kn. 2, p. 132.

¹⁴ Čulkov, *Istoričeskoe opisanie rossijskoj kommercii*, tom I, kn. 2, p. 103.

¹⁵ Čulkov, *Istoričeskoe opisanie rossijskoj kommercii*, tom V, kn. 2, p. 117-118.

¹⁶ Čulkov, *Istoričeskoe opisanie rossijskoj kommercii*, tom V, kn. 2, p. 118.

were exempted from paying these 3% as well¹⁷. This measure clearly served a double goal: stimulating both the development of a Russian merchant community and of the port of St. Petersburg, but it is only at the end of 1721, after having signed the Peace Treaty of Nystadt, that more structural and efficient measures were taken to promote trade at St. Petersburg. A groundbreaking ukaz of November 26, 1721 literally redesigned the hinterlands of the Russian ports in the Baltic and the port of Archangel, creating considerable comparative advantages for the port of St. Petersburg¹⁸.

By that time, the increasing attention that was paid to the establishment of a Baltic fleet had already resulted in the foundation of a number of ship wharfs and additional industries (manufactures): ship building and timber production, weaponry, metallurgy and iron industry, and textile industry¹⁹. The stimulating effect of these industries on Russian exports can hardly be underestimated. Even though the Great Northern War (1700-1721) surely had slowed down their development, the characteristics of exports from St. Petersburg and other Russian ports after 1721 can be explained by the early signs of industrialization observed throughout the first decade of the eighteenth century.

The early development of the ship building industry was an important impulse for the timber producing industry²⁰. In addition to state-controlled ship building wharfs, a number of regional centers for the production of timber arose in the first decades of the eighteenth century. In 1706, the first fine-blade sawmill was put into use in the area around Archangel, soon followed by sawmills in Narva and in the surroundings of Novgorod, along the Sias and near Vyšnij Voloček, both located along waterways that lead directly to St. Petersburg (see illustration 1)²¹. The iron industry, at that time organized and controlled by the government, developed quickly in the first decades of the eighteenth century and was located in the Olonets Region (north of Lake Onega) and in the Ural Mountains (see illustration 2)²².

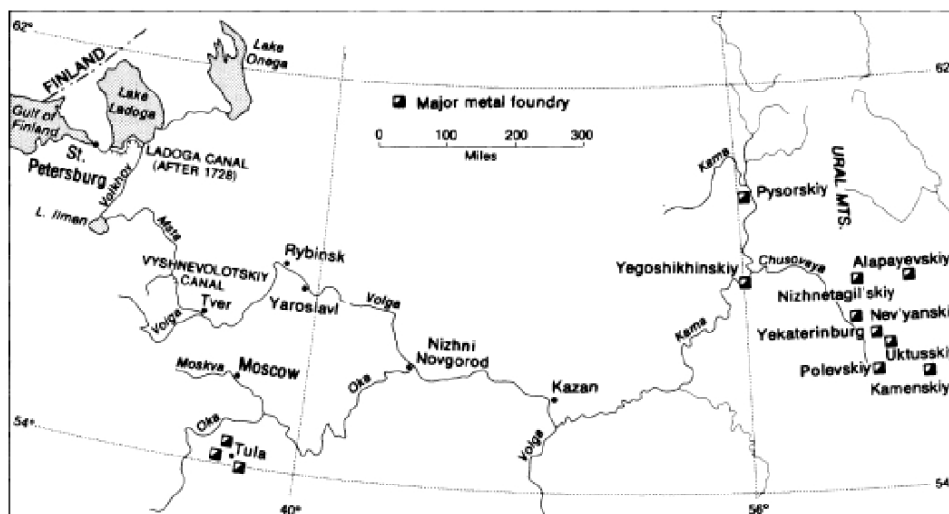


Illustration 2: Major metal foundries in the Russian interior. Source: Matley, 'Defense manufactures'.

¹⁷ A. Semenov, *Izuchenie istoricheskikh svedenii o rossiiskoy vneshney torgovle i promyshlennosti s poloviny XVII-go stoletiya po 1858 god 9* (reprint, 3 parts bound in 2 vols), Newtonville, Oriental Research Partners, 1977, I, pp. 56-57.

¹⁸ PSZ, VI, Nr. 3860; Repin, 'Ot diskriminacii k fritrederstvu', p. 231; Čulkov, *Istoričeskoe opisanie rossijskoj kommercii*, tom I, kn. 2, pp. 103-105.

¹⁹ Ian M. Matley, 'Defense Manufactures of St. Petersburg 1703-1730' // *Geographical Review*, 1981, Vol. 71, Nr. 4, pp. 411-426; Arcadius Kahan, 'Entrepreneurship in the Early Development of Iron Manufactories in Russia' // *Economic Development and Cultural Change*, 1962, Vol. 10, No. 4, pp. 395-422; Daniel Wallace, 'Entrepreneurship and the Russian Textile Industry: From Peter the Great to Catherine the Great' // *Russian Review*, 1995, Vol. 54, Nr. 1, pp. 1-25.

²⁰ Matley, 'Defense Manufactures of St. Petersburg', p. 415.

²¹ Matley, 'Defense Manufactures of St. Petersburg', p. 416.

²² Kahan, 'Entrepreneurship in the Early Development of Iron Manufactories in Russia', p. 401.

Despite its large distance to the Baltic front, the production supplies in the Urals appeared to be profitable and of good quality. Problematic, however, was the large distance to St. Petersburg and the difficulties in transporting iron from the Urals to the Russian capital: originally there was no direct connection over water between the two regions. In 1703 and 1709, a canal was dug between the Tsna and the Tvertsa Rivers close to Vyšnij Voloček (see illustrations 1 and 2). From 1710 onwards, iron could be transported over water to St. Petersburg, though even then transportation was time-consuming (up to five months) and difficult (especially on Lake Ladoga)²³.

3. Economic policies after the Peace Treaty of Nystadt, 1721-1724

From 1721 onwards, only goods originating in Pskov and its district could be transported to Narva for export²⁴. Goods originating near Gžackaja Pristan' and closer to Velikie Luki had to be sent to St. Petersburg instead of Riga (see illustration 1); Riga's hinterland (i.e. the geographical area from which goods exported a certain port could originate) was restricted to West-Russia and Ukraine²⁵. The hinterland of Archangel was limited to the areas in the districts along the Northern Dvina that had an immediate connection with Archangel via this river²⁶. Export goods that were transported previously to the Jug River or other rivers, or to Vologda via the winter route, now had to be transported to St. Petersburg instead. In 1722 merchants of Pskov obtained the freedom to send their goods to Narva or St. Petersburg according to their needs²⁷, which subjected Narva once more to severe competition from St. Petersburg. In the same year, Narva was put under the rule of the governor of St. Petersburg²⁸ after which both St. Petersburg and Narva obtained a tax advantage of 20% and 1% respectively as opposed to other ports in the Baltic Sea²⁹.

Next to this reshaping of the hinterlands of Russian ports in the Gulf of Finland and Archangel, from an administrative, institutional point of view, the *Instruction about the use of forest resources (val'dmejsterskaja instrukcija)* of December 1723³⁰ and the customs tariff of 1724³¹ appeared to be of major importance for the further development of foreign trade with Russia in the eighteenth century. The *Instruction about the use of forest resources*, the primary goal of which was to secure the needs of the Russian navy and of the "distant new capital of the Russian Empire", allowed to log timber along the Northern Dvina and its adjacent rivers (i.e. in the hinterland of Archangel)³². Furthermore, it contained a number of regulations that gave an impulse to the export of timber products from the areas surrounding Lake Ladoga, Lake Il'men and its adjacent rivers³³. Much to the discontent of Novgorodian and Pskovian merchants³⁴, in the *Instruction about the use of forest resources*, extensive rights were granted to Russian and

²³ Matley, 'Defense Manufactures of St. Petersburg', pp. 420-423.

²⁴ Čulkov, *Istoričeskoe opisanie rossijskoj kommercii*, tom V, kn. 2, p. 118.

²⁵ Čulkov, *Istoričeskoe opisanie rossijskoj kommercii*, tom V, kn. 2, p. 174; Repin, 'Ot diskriminacii k fritrederstvu', p. 231; PSZ, VI, Nr. 3860; Semenov, *Izučenie istoričeskikh svedenii*, I, pp. 58-59.

²⁶ The geographical location of the provinces is described as follows: "... Provincii, kotorye prilegli (...) k vodjanomu chodu Dviny bez perevolok zemleju [mijn cursivering]". This literally means that no passages over land (barrages) were allowed during transportation of goods to Archangel.

²⁷ Čulkov, *Istoričeskoe opisanie rossijskoj kommercii*, tom V, kn. 2, pp. 118-119.

²⁸ Čulkov, *Istoričeskoe opisanie rossijskoj kommercii*, tom V, kn. 2, pp. 123-124.

²⁹ Semenov, *Izučenie istoričeskikh svedenii*, I, p. 58.

³⁰ More information about the history of Russian forestry can be found in: V. Vrangl', *Istorija lesnogo zakonodatel'stva v Rossijskoj imperii s prisovokupleniem očerka istorii korabel'nyh lesov Rossii*, Sankt-Peterburg, 1841; N.V. Šelgunov, *Istorija lesnogo zakonodatel'stva*, Sankt-Peterburg, 1857; E.G. Istomina, *Lesosochranitel'naja politika v Rossii v XVIII – načale XX v. // Otečestvennaja istorija*, 1995, Nr. 4.

³¹ 'Tarif sanktpeterburgskogo, vyborgskogo, narvskogo, archangelogorodskogo, kol'skogo portov' // *Ukazy blažennye i večnodostojnye pamjati gosudarja imperatora Petra Velikogo samodržca vserossijskogo. Sostojavšiesja s 1714, po končinu Ego Imperatorskogo Veličestva, Genvarja po 28 čislo, 1725 godu. Napečatany po ukazu vsepresvetlejšej deržavnejšej velikoi gosudaryni imperatricy Anny Ioannovny samodržicy vserossijskoj*. Sanktpeterburg: Imperatorskaja Akademija Nauk, 1739, pp. 47-81.

³² PSZ, nr. 4379; Čulkov, *Istoričeskoe opisanie rossijskoj kommercii*, tom I, kn. 2, pp. 106-107.

³³ PSZ, nr. 4379.

³⁴ Čulkov, *Istoričeskoe opisanie rossijskoj kommercii*, tom V, kn. 2, pp. 125-126.

foreign merchants for logging masts along the Luga and Pljussa Rivers³⁵. The differentiated customs tariff introduced in 1724 applied to the import and export of goods via St. Petersburg, Vyborg, Narva, Archangel and Kola³⁶. According to the new tariff, on almost all exports from Archangel an additional levy of 25% applied, next to the 5% export duty that also applied to the exports from St. Petersburg and the other ports mentioned in the 1724 tariff regulation³⁷. With the customs tariff being introduced, St. Petersburg's exceptional position was strengthened once again.

Together with the foundation of textile manufactures around St. Petersburg and the further development of the iron industry in the Ural Mountains³⁸, the continued diffusion of the Dutch fine-blade sawmill technology in the eastern part of the Gulf of Finland³⁹ would have a major impact on the respective roles of St. Petersburg, Archangel, Narva and Vyborg in Russia's foreign trade. Narva and Vyborg became ports for the exportation of timber⁴⁰; Archangel became a port of regional importance. St. Petersburg would become Russia's main gateway to Europe for exports of valuable goods originating in the Russian interior, while it would also serve as the main gateway to the Russian interior for imports of valuable goods from Europe and its colonies⁴¹.

4. Polarization

The wide variety of domestic and foreign economic policy measures described in the previous paragraphs shared one common goal: making St. Petersburg a "New Amsterdam". The cumulative effect of these economic policy measures can be denoted as a process of polarization that affected all possible geographical levels: (1) the Russian Empire's governmental structure, (2) distant regions in Russia's interior, (3) the traditional centers of trade Novgorod and Pskov and in a broader sense North-West Russia as a whole and (4) the hinterlands of ports in the eastern part of the Gulf of Finland and of the port of Archangel.

Polarization occurred in the first decades of the eighteenth century cannot be separated from two related motives: *dominium maris baltici* and *nation building*. *Dominium maris baltici* stands for domination in the Baltic Sea, a wish that occupied many of the powers surrounding the Baltic Sea for several centuries⁴². From the seventeenth century, when Sweden became a dominant power in the Baltic, the meaning of *dominium maris baltici* became related to the expansion politics of maritime powers⁴³. It is in this same sense that Russia's motivation to strive for *dominium* needs to be understood. Russia wanted to become a maritime power. The reforms that were necessary to achieve this goal, had a scope that went far beyond the political level. The establishment of a Russian navy, merchant marine and a dedicated, self-conscious economic policy were indispensable ingredients of the successful control of the Baltic.

Nation building was the second key concept in the first decades of the eighteenth century; it is a term that can have various meanings, depending on the angle chosen. In all cases, however, *nation building*

³⁵ Čulkov, *Istoričeskoe opisanie rossijskoj kommercii*, tom V, kn. 2, p. 127.

³⁶ 'Tarif sanktpeterburgskogo, vyborgskogo, narvskogo, archangelogorodskogo, kol'skogo portov' // *Ukazy blažennye i večnodostojnye pamjati gosudarja imperatora Petra Velikogo samoderžca vserossijskogo. Sostojavšiesja s 1714, po končinu Ego Imperatorskogo Veličestva, Genvarja po 28 čislo, 1725 godu. Napečatany po ukazu vsepresvetlejšej deržavnejšej velikoi gosudaryni imperatricy Anny Ioannovny samoderžicy vserossijskoj*. Sanktpeterburg: Imperatorskaja Akademija Nauk, 1739, pp. 47-81.

³⁷ Repin, 'Ot diskriminacii k fritrederstvu', pp. 231-232; Čulkov, *Istoričeskoe opisanie rossijskoj kommercii*, tom I, kn. 2, pp. 108-109; tom V, kn. 2, pp. 129-132.

³⁸ Matley, 'Defense Manufactures', pp. 418-423.

³⁹ Sven-Erik Åström, *From Tar to Timber: Studies in Northeast European Forest Exploitation and Foreign Trade 1660-1860*, Helsinki, Societas Scientiarum Fennica, 1988 (Commentationes Humanarum Litterarum 85). And also: S.-E. Åström, 'Technology and Timber Exports from the Gulf of Finland 1661-1740' // *The Scandinavian Economic History Review*, 1975, 23, 1-14.

⁴⁰ Čulkov, *Istoričeskoe opisanie rossijskoj kommercii*, tom V, kn. 2, p. 118; 125.

⁴¹ Simon van Brakel, 'Statistische en andere gegevens betreffende onzen handel en scheepvaart op Rusland gedurende de 18^e eeuw' // *Bijdragen en mededeelingen van het historisch genootschap*, 1913, Vol. 34.

⁴² Nikolaj Petersen, 'Denmark as an International Actor 706-2006' // *World Political Science Review*, 2006, Vol. 2, Nr. 3, pp. 210-211.

⁴³ Petersen, 'Denmark as an International Actor', p. 211.

stands for a whole of institutions, rules and (power) relations that manifests itself in a distinct territory⁴⁴. The economic policy measures that Peter the Great implied upon the Russian Empire had a profound impact on Russia's economy and on all economic agents involved in it. The Dutch merchant community active in trade with Russia was no exception to this rule.

II. CHANGES IN THE DUTCH-RUSSIAN TRADE SYSTEM

The far-reaching economic policy changes almost immediately affected the Russian economy. In a few years time, the Archangel's turnover dropped from 2,3 million rubles on annual average in the years 1717-1719 to only 120.000 rubles in 1725. In the same period, the value of exports via St. Petersburg exploded: from 233.000 rubles in 1718 to 2.035.200 rubles in 1725.

year	Archangel	St. Petersburg	Total
1704	1.581.400	-	1.581.400
1705	1.688.000	-	1.688.000
1706	1.207.400	-	1.207.400
1707	1.588.600	-	1.588.600
1708	1.558.900	-	1.558.900
1709	1.775.000	-	1.775.000
1710	1.792.900	-	1.792.900
1718	?	233.000	?
1717-1719 ⁴⁵	2.344.200	268.600	2.612.800
1720	1.445.500	?	?
1723	294.000	?	?
1725	120.200	2.035.200	2.155.400
1726	285.400	2.403.400	2.688.800
1739	326.900	2.247.300	2.574.200
1740	676.600	?	?
1743	309.800	2.214.800	2.524.600
1744	273.700	3.717.400	3.991.100
1748	283.300	2.413.600	2.696.900
1749	339.800	3.910.000	4.249.800
1750	282.100	4.439.800	4.721.900
1751	421.000	3.510.000	3.931.000
1752	312.400	4.357.600	4.670.000

Table 1: Value of goods exported from Archangel and St. Petersburg in the first half of the 18th century⁴⁶

In a number of Dutch and Russian publications about Dutch merchants and merchant communities in Russia, detailed descriptions of their activities and evaluations of the position of Dutch merchants in the Russian trade system of the seventeenth and eighteenth centuries can be found⁴⁷. From these

⁴⁴ Jan Glete, 'Cities, state formation and the protection of trade in Northern Europe, 1200-1700' // Hanno Brand, Paul Holm, Leos Muller (eds.), *The Dynamics of Economic Culture in the Northsea and Baltic Region (ca. 1200-1700)*, Hilversum: Verloren, 2007. Een bondige definitie is terug te vinden in: Francis Fukuyama, *State-Building: Governance and World Order in the Twenty-First Century*, [London]: Profile Books, [2005], p. xvii: "State-building is the creation of new government institutions and the strengthening of existing ones".

⁴⁵ Average per year (remark by Repin). See: Repin, 'Izmenenie', p. 177.

⁴⁶ Repin, 'Izmenenie', pp. 175-192; Repin, 'Ot diskriminacii k fritrederstvu', pp. 228-249.

⁴⁷ Viktor Zacharov, *Zapadnoevropejskie kupcy v rossijskoj trgovle XVIII veka*, Moskva: Nauka, 2005, pp. 40-61; 250-265; 662-663; J.W. Veluwenkamp, 'The Purchase and Export of Russian Commodities in 1741 by Dutch Merchants Established at Archangel' // C.M. Lesger, L. Noordegraaf (eds.), *Entrepreneurs and entrepreneurship in early modern times: merchants and industrialists within the orbit of the Dutch staple market*, Den Haag: Stichting Hollandse Historische Reeks, 1995, pp. 85-101; Viktor Zacharov, *Zapadnoevropejskie kupcy v Rossii. Èpocha Petra*

works, it appears that the number of Dutch merchants active in Russia in the first decades of the eighteenth century was limited, but nevertheless important. A small group of influential Dutch merchant families had representatives and/or family members living in strategic Russian cities like Archangel, Moscow, Vologda, Jaroslavl' and others. Often, these families profited from their close ties with the Russian government, which resulted in privileges granted to them. The Dutch trade colony in Russia was linked to the rest of Europe through similar family ties. The Dutch merchant community in Russia was specialized in "typically Russian" goods like skins, leather, caviar, potash, timber and the like. Many of the Dutch merchants in St. Petersburg originally started their "Russian" businesses in Archangel. They had lived and worked there as long as Peter the Great's economic policy did not disturb their activities⁴⁸. The decline of trade through Archangel immediately had its impact on the size of the Dutch merchant community in St. Petersburg. From 1718 onwards, several Dutch merchants moved from Archangel to St. Petersburg, others would follow after the end of the Great Northern War⁴⁹. Unfortunately, no sources are available that could provide us with the necessary details to fully understand the relocation of merchants from Archangel to St. Petersburg, but according to an analysis of the Dutch historian Jan Willem Veluwenkamp, at least 16 out of 43 merchants that signed a cooperation agreement in St. Petersburg in 1722 had originally started their activities in Russian trade in Archangel⁵⁰.

Profound economic-policy changes, the speed and severity with which these changes were carried out and the comprehensive scope they had, inevitably had their consequences for the Dutch-Russian trade system. Around 1718, Narva, Vyborg and St. Petersburg had become accessible again to foreign ships. This, and the reorientation of Russian commercial flows to the Gulf of Finland that started as early as 1713 with legislative measures, increasingly showed its impact on Dutch trade with Russia.

In the remainder of this paper, I will examine how the Dutch maritime shipping community adapted to these new circumstances, thus implicitly adopting an analytical point of view that allows for shipping and trade to be studied as independent and integral economic activities, each evolving according to their own rules.

III. THE CHANGING STRUCTURE OF DUTCH MARITIME SHIPPING TO RUSSIA

1. Introduction

Dutch shipping to Russia took a radically new form after the foundation of St. Petersburg with its accompanying political, geographical and economic changes. The structural changes that occurred in the organization of Dutch shipping with Russia in the first two decades following the foundation of St. Petersburg can only be explained as the interplay of a number of parameters, namely: port of destination, origin of the ship master, cargo carried and size of the ship. Though these parameters may seem very specific and straightforward at first, it is important to fully acknowledge the complex and dynamic nature of the social, economic, political and geographical knowledge they represent. The individual ship master carrying these parameters is the primary unit of analysis. He is the economic agent under study. The individual ship master is not a rational, profit-maximizing, all-knowing *homo oeconomicus*. On the contrary: he is boundedly rational and risk limiting, and he has limited knowledge.

I, Moskva: Rossijskaja političeskaja ěnciklopedija (ROSSPĚN) 1996, 346 pp.; V.N. Zacharov, 'Inostrannye kupcy v Archangel'ske pri Petre I' // Ju.N. Běspjatych (red.), *Archangel'sk v XVIII veke*, Sankt-Peterburg: BLIC, 1997, pp. 181-227; Jan Willem Veluwenkamp, 'Dutch merchants in St. Petersburg in the eighteenth century' // *Tijdschrift voor Skandinavistiek*, 1995, vol. 16, pp. 235-291. J.W. Veluwenkamp, 'De Nederlandse gereformeerde gemeente te Archangel in de achttiende eeuw' // *Nederlandsch Archief voor Kerkgeschiedenis*, 1993, Vol. 73, Nr. 1, pp. 31-67; J.W. Veluwenkamp, 'Familienetwerken binnen de Nederlandse koopliedengemeenschap' // *Bijdragen en Mededelingen betreffende de Geschiedenis der Nederlanden*, 1993, Vol. 108, afl. 4, pp. 655-672.

⁴⁸ Veluwenkamp, 'Dutch Merchants in St. Petersburg', p. 247.

⁴⁹ Veluwenkamp, 'The Purchase and Export', pp. 86-87; Zacharov, 1985, p. 186; Knoppers, *Dutch trade with Russia from the time of Peter I to Alexander I: a quantitative study in eighteenth century shipping*. Montr  al, ICES, 1976. 3 vol., I, pp. 148; 151; 224.

⁵⁰ Veluwenkamp, 'Dutch merchants in St. Petersburg', p. 243; Veluwenkamp, 'Familienetwerken', pp. 659-660.

These characteristics of the individual ship master are expressed in the four parameters introduced above.

The parameter 'homeport' helps to reveal what knowledge the ship master may have possessed that could help him to successfully carry out economic actions⁵¹. The parameter 'homeport' is closely related to the other three parameters. But whereas the 'homeport' of the ship master is primarily associated with social and technical rules (or institutions and technologies)⁵², the parameters 'destination', 'cargo' and 'ship size' are linked directly with the ship master's operations and the behavioral and cognitive rules he applied in his economic activities⁵³. In a spatio-temporal framework, empirically established changes in 'destination', 'cargo' or 'ship size' reveal change in the behavioral and cognitive rules. Thus, these parameters are sufficient to examine change in the operational strategies of Dutch maritime ship masters. In order to explain these changes as structural or non-structural, population analysis is necessary. Population analysis embraces a non-conventional type of aggregation, denoted in evolutionary economics by the term *mesoeconomics*. The basic unit of population analysis is the economic actor, who is free to choose and adopt from a variety of habits and routines, thus giving shape to *dynamic populations* of economic actors originating, adopting and retaining operational practices. What is crucial here is that the recurrent adoption of a certain novelty by many individuals can be associated with the notion of institution and, thus, with the existence of organizational routines⁵⁴. For an institution to remain effective, a regular supply of new *rule followers* is necessary. When a certain routine does no longer attract new *rule followers*, it stagnates and will be left by its population next. The necessity of “new supply” is therefore a key element in the analysis of populations of economic actors.

Only analysis of all four interrelated parameters, their evolution in time and space and the dynamics of their carrier populations can reveal how the structure of Dutch shipping with Russia changed in the two decades following the foundation of St. Petersburg.

Dependent on the relative weight of either of these parameters in the ship master's individual decision making, a continuous trade-off between cargoes and routes can be observed, resulting in a prevalence of either flexibility or repetitiveness in the Dutch ship masters' operational strategies. A preliminary taxonomy of the ship master's preferences with regard to cargo and destination may look as follows:

Routes/cargoes	Flexible	Repetitive
Flexible	Various cargoes, various routes	Various cargoes, one route
Repetitive	One cargo, various routes	One cargo, one route

Table 2: trade-off between repetitiveness and flexibility in the choice of cargo and routes

The process of adaptation started in 1718, when the newly conquered ports in the Baltic effectively reopened to foreign trade, and resulted in the establishment of a new order as early as 1724. The seven-year period between 1718 and 1724 was a period of transformation, marked by recurrent changes in the relative position of the various ports in this study as opposed to one another (see graph 1).

The main empirical features of this process of transformation were: (1) the rapid abandonment of the

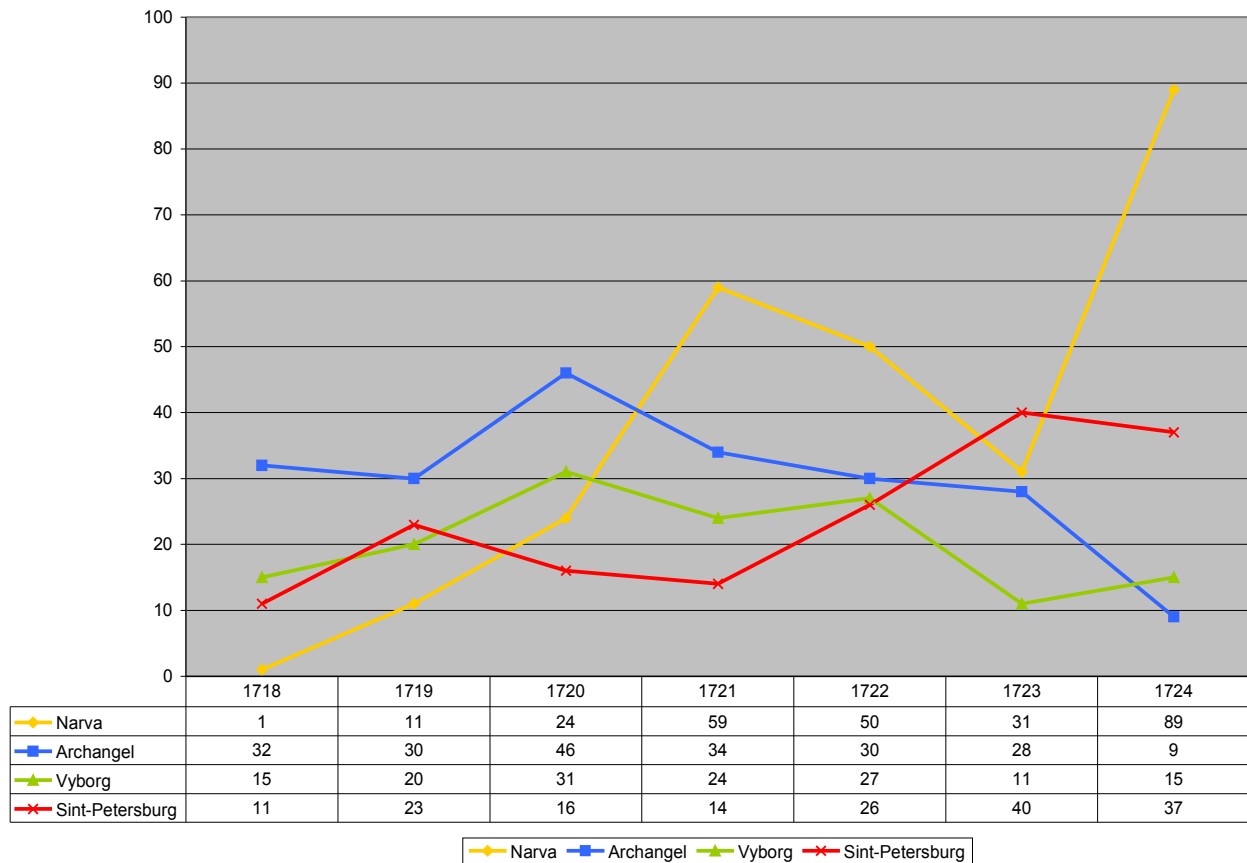
⁵¹ In analytical terms, the parameter 'homeport' and the knowledge associated with it, unites 0th and 1st order object rules. 0th order rules are described by Dopfer and Potts as rules “(...) that concern such things as the role of the state in creating and implementing systemic rules, such as the rule of law, competition policy, monetary policy, property rights, and suchlike. They also concern the collective force of empathies, sympathies and cooperative trust extended as institutions in the form of behavioural and social rules”. 1st order rules are defined as generic rules originated, adopted and retained by carriers for operations”: See: Kurt Dopfer, Jason Potts; *The General Theory of Economic Evolution*, London and New York: Routledge, 2008, pp. 8-10.

⁵² Dopfer, Potts, *The General Theory*, pp.7-8. Object rules are “the class of rules for organizing things, including other people as the rule carriers (...)”. Object rules for organizing people are called social rules; object rules for organizing matter energy are called technical rules.

⁵³ Dopfer, Potts, *The General Theory*, pp.7-8. Subject rules “related to an individual agent and define the internal rules of the agent's mind [i.e. cognitive rules] and the outwardly directed rules of the agent's behaviour [i.e. behavioural rules]”.

⁵⁴ Kurt Dopfer, ‘Evolutionary economics: a theoretical framework’ // K. Dopfer (ed.), *The Evolutionary Foundations of Economics*, Cambridge University Press, 2005, pp. 41-44.

Archangel route by the majority of Dutch ship masters; (2) the increasing number of shifts of the shipping population active on the Archangel route to the newly established populations active on the Narva and Vyborg routes; (3) the almost complete absence of shifts from Archangel to St. Petersburg; (4) the immediate appearance of a strong interference between the populations of Dutch ship masters active on Narva and Vyborg routes.



Graph 1: Annual number of Dutch ship masters in Narva, Archangel, Vyborg and St. Petersburg, 1718-1724.

2. The abandonment of the Archangel route

Analysis of the population of Dutch ship masters active on the Archangel route (further: the Archangel population) shows that there was a large degree of continuity between the population of the years 1697-1717 and that of the years 1718-1724. This continuity abruptly came to an end in 1724. In the following period 1725-1731, only a minority of less than 30% of all Dutch ship masters had previously been active on the Archangel route⁵⁵. 96 of the 110 members of the Archangel population in 1718-1724 disappeared after 1724. 60 of them had also been member of the Archangel population in 1697-1717. The influence of this fundamental change is reinforced by a general decrease in the size of the Archangel population between 1718-1724 and 1725-1731 from 110 to 47 members⁵⁶.

The turnaround on the Archangelroute took place between 1718 and 1723. At least 10 ship masters executed their last voyage to Archangel each year, with a peak of 19 in 1723.

⁵⁵ Scheltjens, *De invloed van ruimtelijke verandering*, pp. 138-139.

⁵⁶ Scheltjens, *De invloed van ruimtelijke verandering*, p. 139.

Year	Number of ship masters on last voyage to Archangel
1718	10
1719	11
1720	16
1721	14
1722	14
1723	19
1724	8
1726	1
1727	2
1728	1
1729	5
1730	5
1731	2

Table 2: Number of ship masters of last voyage to Archangel, 1718-1731.

When we concentrate further on the ship masters who executed their last return voyage to Archangel in the period 1718-1724, a structural spatial evolution can be identified.

3. Shift from Archangel to Narva

33 Dutch ship masters shifted from participation on the Archangel route to participation on one of the routes to the eastern part of the Gulf of Finland. For seven of them, this shift was a one-off event, the other 26 would remain active in the eastern part of the Gulf of Finland in second half of the 1720s and sometimes up to the early 1730s. That almost $\frac{1}{3}$ of the Dutch ship masters formerly active on the Archangel route would venture an attempt on the routes to the eastern part of the Gulf of Finland is striking; that this did not remain a one-off event for the majority of them is even more unexpected. But most striking is the fact that most ship masters that shifted from Archangel to the Gulf of Finland did not at all call at St. Petersburg, but appeared almost integrally on the Narva and/or Vyborg routes instead⁵⁷. This fact clearly shows that trade and shipping followed distinct patterns and substantiates a claim to study maritime shipping as an integral economic activity that is marked not only by the nodes it connects nor by its own social structures exclusively, but by both elements at the same time.

While the diverse patterns of shipping and trade express the individual complexity of all economic actions, their explanation can be quite straightforward. Based on a comparison of the average ship sizes in the ports of St. Petersburg, Narva, Vyborg and Archangel⁵⁸, it becomes clear that the ships on the Archangel route were probably too large to enter the port of St. Petersburg.

	Archangel	Narva	Vyborg	St. Petersburg
Number of ships	96	78	33	51
Average ship size (in last)	158	157	163	63

Table 3: Average ship size (measured in last) of Dutch ships active on the Archangel, Narva, Vyborg and St. Petersburg routes, 1718-1724. Source: *galjootsgeldregisters*.

⁵⁷ Scheltjens, *De invloed van ruimtelijke verandering*, pp. 139-140.

⁵⁸ This comparison is based on the so-called *galjootsgeldregisters* that are part of the archives of the Directory Board of Muscovite Shipping and Trade and the Directory Board of Baltic Shipping and Trade at Amsterdam. See: GAA, nr.6: DMH, inv.nr. 58-61 and GAA, nr. 78: Archive of the Directory Board of Baltic Shipping and Trade (DOH), inv. Nrs. 96-99. The ship size is measured in *last*, a complex early-modern measure that varied from place to place. In Amsterdam, where the ships were measured, one *last* accounted for approximately 2918 litres. See: Allen, Robert C. and Tommy E. Murphy [2005]; Just before the metre, the gram, the litre: Building a Rosetta Stone of Weights and Measures in the Early Modern World, Table VI, Version [05.08] (http://www.nuffield.ox.ac.uk/users/murphy/measures/before_metre.htm).

The ships which participated on the St. Petersburg route in the period 1718-1724 were on average almost 100 *lasts* smaller than ships on the Vyborg-, Narva- or Archangel route. Although this explanation seems very simple, it is an expression of a complex interplay of factors that influenced the *direction* of these ship masters' activities. The size of their ships is not an independent given; it is related to at least two other determinants of the *direction* of the ship master's activities: the cargo carried and the origin of the ship master.

4. *A new route: smaller ships, different cargoes, different origins*

Rivalry between the different possible destinations becomes apparent in the multiple route changes registered for the Dutch population of ship masters active in Narva, Vyborg, St. Petersburg and Archangel in the period 1718-1724⁵⁹. Some of these changes would have a temporary character, while others would be permanent. Interference existed between the various populations of Dutch ship masters active in each of the four ports of this survey. For some populations, the number of members that also participated on other routes was higher than for others. Additionally, significant differences in the strength of the interference between populations of ship masters could be observed. In illustration 3, interference between populations of ship masters is visualized.

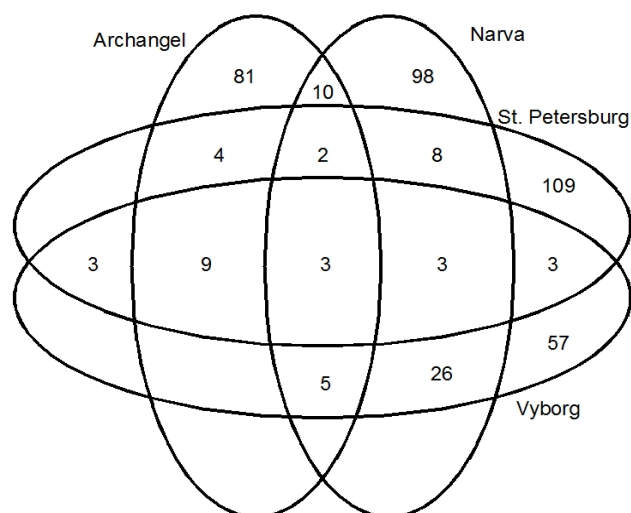


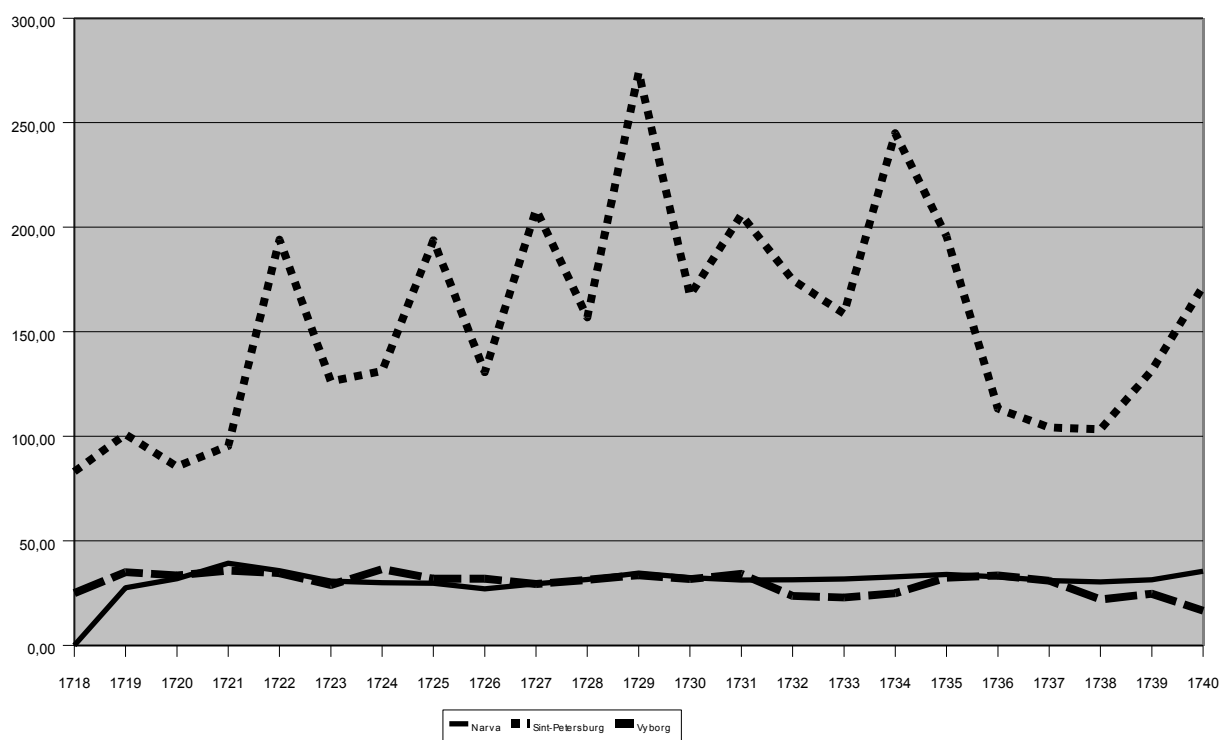
Illustration 3: Visual representation of the interference between populations of Dutch ship masters, 1718-1724

The number of Dutch ship masters that was active not only on the St. Petersburg route, but also in one or more other ports in this survey was limited to 20 on a total of 129 population members. Compared to the participation on different routes of 46 of the 103 ship masters of the Vyborg population, 54 of the 152 ship masters of the Narva population and 27 of the 108 Dutch ship masters on the Archangel route, the low degree of interference of the members of the St. Petersburg population is striking.

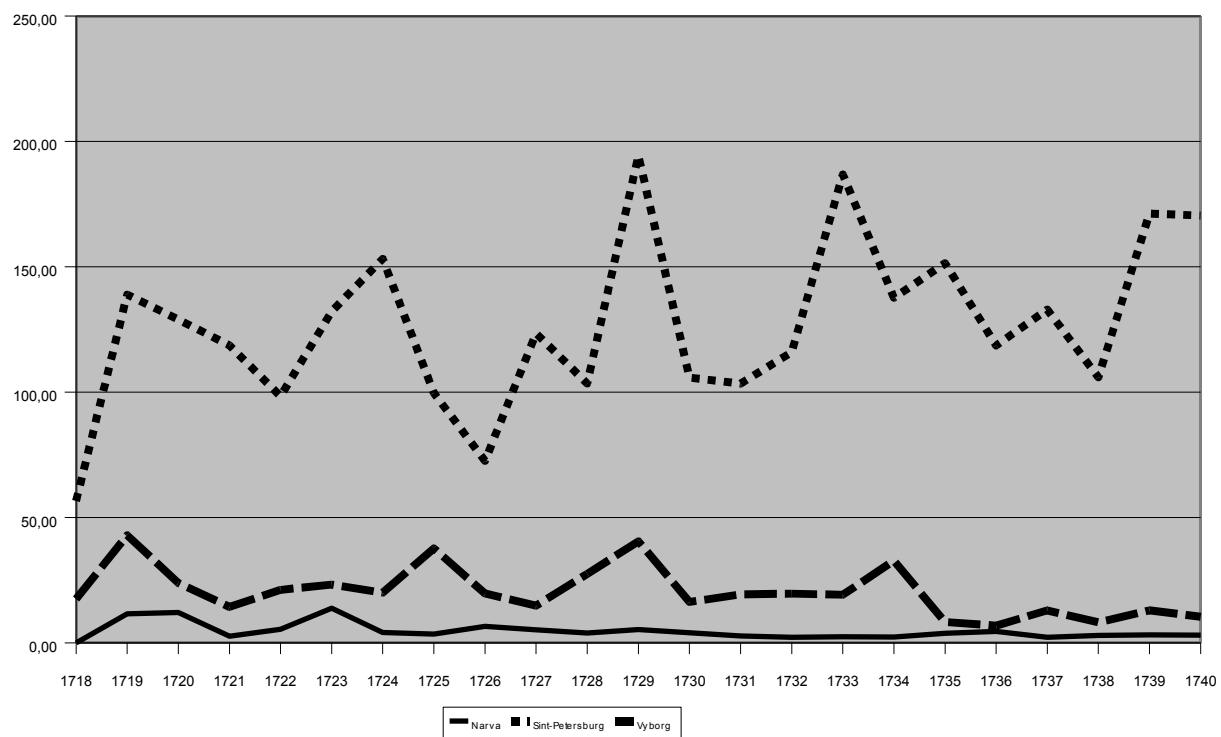
Next to the average size of the ships on the St. Petersburg route (see previous paragraph), additional information about the cargo carried and the homeport of the ship master substantiate that the St. Petersburg population was a separate population with its own characteristics. The cargoes handled at St. Petersburg (both imports and exports) differed completely from the cargoes that entered and left Narva and Vyborg. The following graphs summarize the average tax that was paid on cargoes imported or exported from these three ports⁶⁰. Not only does it immediately become clear that the average value of imports (126,98 rdl) and exports (154,43 rdl) at St. Petersburg was significantly higher, it was also far less stable than the average value of imports and exports at Narva (imports: 4,68 rdl; exports: 30,51 rdl) and Vyborg (imports: 20,43 rdl; exports: 29,77 rdl), which can be related to the large variety of products that entered and left St. Petersburg as opposed to the timber exports that dominated Narva and Vyborg.

⁵⁹ For details, see: Scheltjens, pp. 128-154.

⁶⁰ The graphs are based on data collected from the *Danish Sound Toll Registers* for the years 1718-1740. These graphs were published earlier in: Scheltjens, *De invloed van ruimtelijke verandering*, pp. lxxxvii-lxxxix.



Graph 2: Average custom value of exported cargo per ship. Source: Danish Sound Toll Registers. Value expressed in rikstaler.



Graph 3: Average custom value of imported cargo per ship. Source: Danish Sound Toll Registers. Value expressed in rikstaler.

The origin of the Dutch ship masters that constituted the St. Petersburg population in 1718-1724 and beyond shows a similar discrepancy between Narva, Vyborg and Archangel on the one hand, and St. Petersburg on the other hand. In the following table, based on the *galjootsgeldregisters* of Amsterdam, the origin of the population members of each of the four ports in this survey is summarized for the period of transformation (1718-1724) and the period of new order (1725-1731).

The dominant regions of origin were Frisia and the Wadden Islands. Both are well-represented in all four populations. In the Narva and Vyborg populations, Frisian ship masters immediately obtained a dominant position, while the declining Archangel population shows an increased participation of West-Frisian ship masters. The St. Petersburg population also had a share of Frisian ship masters and ship masters from the Wadden Islands, but they did not dominate shipping on this route in any way similar to Narva or Vyborg. On the contrary, ship masters from North-Holland (i.e. Amsterdam and its surroundings) gained a significantly stronger presence in the St. Petersburg population after 1724 than in the other populations. But neither did the St. Petersburg population.

		Frisia	Wadden Islands	North-Holland	West-Frisia	# members ⁶¹
Archangel ⁶²	1718-1724	32,6%	22,5%	21,6%	18,9%	227
	1725-1731	10,5%	12,6%	8,4%	30,5%	95
Narva	1718-1724	76,4%	4,9%	11,1%	2,1%	144
	1725-1731	63,2%	11,3%	9,6%	3,1%	737
St. Petersburg	1718-1724	32,9%	32,9%	25,7%	4,3%	70
	1725-1731	20,4%	19,9%	27,3%	7,4%	216
Vyborg	1718-1724	83,7%	11,6%	2,4%	0,0%	43
	1725-1731	56,4%	15,5%	9,1%	10,9%	110

Table 4: Origin of ship masters in the Archangel, Narva, Vyborg and St. Petersburg populations, 1718-1724 and 1725-1731. Source: galjootsgeldregisters.

The St. Petersburg population seems to have been a population that constituted of many 'incidental' participants, by which it is meant that these participants appeared on the St. Petersburg route when there were specific opportunities to seize. In this manner, the St. Petersburg population differed from the Narva and Vyborg populations that were dominated by specific groups of ship masters with the same origin, that participated regularly on these routes.

From the above, it appears logical to say that the divergent characteristics of the parameters 'cargo', 'ship size' and 'homeport' also found expression in distinct operational strategies employed by the members of the St. Petersburg population.

5. Growing interference and hierarchy

In the previous paragraph, the notion of interference between populations had already been mentioned and visualized (see illustration 3). This interference was the strongest between (1) Archangel and Narva, (2) Archangel and Vyborg, and (3) Narva and Vyborg. During the years 1718-1724, interference between the different populations must be understood as the expression of a learning process. In the years after 1724, the interference between the Archangel and Vyborg populations would disappear almost completely, while that between Narva and Vyborg would continue to be strong. Apparently, until 1724, Vyborg had temporarily satisfied the needs of Dutch ship masters who were formerly active on

⁶¹ As registered in the *galjootsgeldregisters*.

⁶² Data about the homeports of Dutch ship masters active on the Archangel route in 1725-1731 is biased because of the exceptionally large number of ship masters for which no homeport is entered in the *galjootsgeldregisters* (33 out of 95 registrations).

the Archangel route. In 1724, the shift from Archangel to the Gulf of Finland came to an end. The result of the period of learning and rivalry becomes clear through comparison of the visualization of the interference in 1718-1724 (illustration 3) and that of the years 1725-1731 (illustration 4 below).

From 1724 onwards, a hierarchical relationship between Narva and Vyborg as possible destinations for ship masters with similar 'homeport', 'cargo' and 'ship size' can be discerned. Vyborg became a secondary destination that satisfied the needs of Dutch ship masters on the Narva route in case their demands were not met.

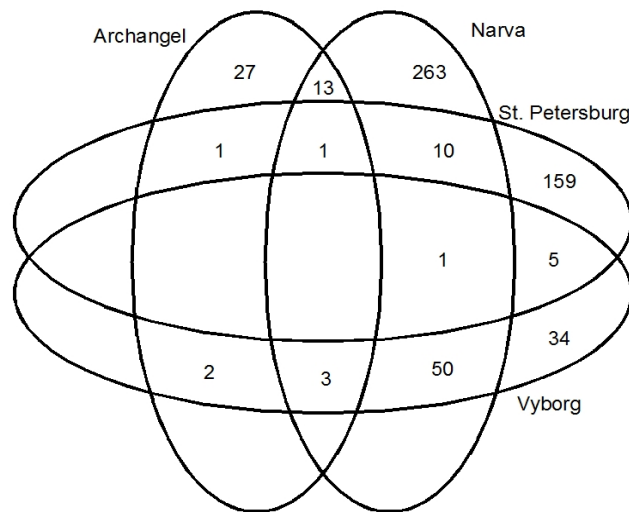


Illustration 4: Visual representation of interference between populations, 1725-1731.

CONCLUSIONS

The new order that appeared after 1724 was marked by the absence of significant changes in the participation rates of Dutch ship masters on one or another route. The activities of the Dutch shipping populations in the second half of the 1720s had the following characteristics: (1) in Archangel, a very small population of Dutch ship masters continued its operations in a regular manner (*flexible/repetitive pattern*); (2) in Narva, a large, highly specialized population of ship masters dominated timber exports (*repetitive/repetitive pattern*); (3) in Vyborg, a small population of ship masters dominated timber exports (*repetitive/repetitive pattern*); (4) in Vyborg and in Archangel, an increasing part of the Dutch shipping population interfered with that of Narva, providing evidence of a hierarchical relation in which Vyborg and Archangel welcomed Narva's overhead (*flexible/repetitive pattern*); (5) in St. Petersburg, a far from stable population of Dutch ship masters imported and exported valuable goods (*flexible/flexible pattern*). Specialization was apparent on various levels. The Archangel population was specialized in its specific route; the Narva and Vyborg populations were specialized in their routes and in the cargoes that they carried from these ports; the St. Petersburg population was – even though formally unstable – active on a route that was used for the import and export of specific kinds of goods that were valued highly at customs.

From an operational point of view, the result of Czar Peter the Great's foreign and domestic economic policies can be described as the emergence of two distinct operational strategies in Dutch shipping to Russia. The first strategy has repetitiveness as its main feature; the second one flexibility. The first strategy applies primarily to Dutch shipping on the Narva route, and by extension to Dutch shipping on the Vyborg and Archangel routes. The repetitive nature of this strategy can best be explained using the parameters identified earlier. The second strategy applies to the St. Petersburg population exclusively. Like the repetitive strategy, the emergence of a predominantly flexible strategy can be explained by the same interplay of port of destination, cargo carried, homeport of the ship master and

size of the ship. These two strategies would become the basis for the further development of Dutch shipping to Russia in the rest of the eighteenth century.

BIBLIOGRAPHY

1. Allen Robert C. and Tommy E. Murphy [2005]; Just before the metre, the gram, the litre: Building a Rosetta Stone of Weights and Measures in the Early Modern World, Table VI, Version [05.08] (http://www.nuffield.ox.ac.uk/users/murphy/measures/before_metre.htm).
2. Åström S.-E., 'Technology and Timber Exports from the Gulf of Finland 1661-1740' // *The Scandinavian Economic History Review*, 1975, Vol. 23.
3. Åström Sven-Erik, *From Tar to Timber: Studies in Northeast European Forest Exploitation and Foreign Trade 1660-1860*, Helsinki, Societas Scientiarum Fennica, 1988 (Commentationes Humanarum Litterarum 85).
4. Brakel Simon van, 'Statistische en andere gegevens betreffende onzen handel en scheepvaart op Rusland gedurende de 18^e eeuw' // *Bijdragen en mededeelingen van het historisch genootschap*, 1913, Vol. 34.
5. Buck P. De, 'De Russische uitvoer uit Archangel naar Amsterdam in het begin van de achttiende eeuw (1703 en 1709)' // *Economisch- en Sociaal-Historisch Jaarboek*, 1988, Vol. 51.
6. Čulkov, *Istoričeskoe opisanie rossijskoj kommercii pri vseh portach i granicach: Ot drevnich vremjan do nyne nastojaščago i vseh preimuščestvennyh uzakonenij po onoj gosudarja imp. Petra Velikago i nyne blagopolučno carstvujuščej gosudaryni imp. Ekateriny Velikaja*, Sankt-Peterburg, Pri Imp. Akad. nauk, 1781-1788, 7 tomov.
7. Dopfer Kurt, 'Evolutionary economics: a theoretical framework' // K. Dopfer (ed.), *The Evolutionary Foundations of Economics*, Cambridge University Press, 2005.
8. Dopfer Kurt, Potts Jason; *The General Theory of Economic Evolution*, London and New York: Routledge, 2008.
9. Fukuyama Francis, *State-Building: Governance and World Order in the Twenty-First Century*, [London]: Profile Books, [2005].
10. Glete Jan, 'Cities, state formation and the protection of trade in Northern Europe, 1200-1700' // Hanno Brand, Paul Holm, Leos Muller (eds.), *The Dynamics of Economic Culture in the Northsea and Baltic Region (ca. 1200-1700)*, Hilversum: Verloren, 2007.
11. Istomina È.G., Lesosochranitel'naja politika v Rossii v XVIII – načale XX v.' // *Otečestvennaja istorija*, 1995, Nr. 4.
12. Jones, Robert E., 'Getting the Goods to St. Petersburg: Water Transport from the Russian interior 1703-1811' // *Slavic Review*, 1984, Vol. 43, No. 3.
13. Kahan Arcadius, 'Entrepreneurship in the Early Development of Iron Manufactories in Russia' // *Economic Development and Cultural Change*, 1962, Vol. 10, No. 4.
14. Knoppers, *Dutch trade with Russia from the time of Peter I to Alexander I : a quantitative study in eighteenth century shipping*. Montréal, ICES, 1976. 3 vol.
15. Matley Ian M., 'Defense Manufactures of St. Petersburg 1703-1730' // *Geographical Review*, 1981, Vol. 71, Nr. 4.
16. Petersen Nikolaj, 'Denmark as an International Actor 706-2006' // *World Political Science Review*, 2006, Vol. 2, Nr. 3.
17. Petrov P.N., *Istorija Sankt-Peterburga s osnovija goroda do vvedenija v dejstvie vybornago gorodskago upravljenija po učreždenijam o gubernijach 1703-1782*. Sankt-Peterburg, Tipografija Glazunova, 1885.
18. *Polnoe Sobranie Zakonov Rossijskoj Imperii. Pervaja Serija s 1649 po 12 dekabnja 1825 goda* (sost. pod rukovodstvom M.M. Speranskogo). Sanktpeterburg: [s.n.], 1830, 45 vol.
19. Repin N.N., 'Izmenenie ob"ema i struktury eksporta Archangel'skogo i Peterburgskogo portov v pervoj polovine XVIII v.' // *Promyšlennost' i torgovlja Rossii XVII-XVIII vv.: sbornik statej*, Moskva: Nauka, 1983.

20. Repin N.N., 'Ot diskriminacii k fritrederstvu: pravitel'stvennaja reglamentacija trgovli čerez Archangel'sk v 20-60-e gody XVIII v. i ee rezul'tat' // Ju.N. Bospjatyč (red.), *Archangel'sk v XVIII veke / Arkhangelsk in the XVIII century*, Sankt-Peterburg: Rossijsko-Baltijskij informacionnyj centr BLIC, 1997.
21. Repin N.N., 'Učastie kupečestva Evropejskogo Severa vo vnešnej trgovle čerez Archangel'sk v pervoj četverti XVIII veka' // *Materialy po istorii Evropejskogo Severa SSSR: Severnyj archeologičeskij sbornik*, vyp. 3, Vologda, 1973.
22. Scheltjens Werner, *De invloed van ruimtelijke verandering op operationele strategieën in de vroeg-moderne Nederlandse scheepvaart: een case-study over de Nederlandse scheepvaart in de Finse Golf en op Archangel, 1703-1740*, Groningen: Barkhuis Publishing, 2009.
23. Šelgunov N.V., *Istorija lesnogo zakonodatel'stva*, Sankt-Peterburg, 1857.
24. Semenov A., *Izučenie istoričeskikh svedenii o rossijskoj vnešnej trgovle i promyšlennosti s poloviny XVII-go stoletija po 1858 god 9 (reprint, 3 parts bound in 2 vols)*, Newtonville, Oriental Research Partners, 1977.
25. 'Tarif sanktpeterburgskogo, vyborgskogo, narvskogo, archangelogorodskogo, kol'skogo portov' // *Ukazy blažennye i večnodostojnye pamjati gosudarja imperatora Petra Velikogo samoderžca vserossijskogo. Sostojavšiesja s 1714, po končinu Ego Imperatorskogo Veličestva, Genvarja po 28 čislo, 1725 godu. Napečatany po ukazu vsepresvetlejšei deržavnejšei velikoi gosudaryni imperatricy Anny Ioannovny samoderžicy vserossijskoi*. Sanktpeterburg: Imperatorskaja Akademiya Nauk, 1739.
26. Veluwenkamp J.W., 'De Nederlandse gereformeerde gemeente te Archangel in de achttiende eeuw' // *Nederlandsch Archief voor Kerkgeschiedenis*, 1993, Vol. 73, Nr. 1.
27. Veluwenkamp J.W., 'Familienetwerken binnen de Nederlandse koopliedengemeenschap' // *Bijdragen en Mededelingen betreffende de Geschiedenis der Nederlanden*, 1993, Vol. 108, afl. 4.
28. Veluwenkamp J.W., 'The Purchase and Export of Russian Commodities in 1741 by Dutch Merchants Established at Archangel' // C.M. Lesger, L. Noordegraaf (eds.), *Entrepreneurs and entrepreneurship in early modern times: merchants and industrialists within the orbit of the Dutch staple market*, Den Haag: Stichting Hollandse Historische Reeks, 1995.
29. Veluwenkamp J.W., *Archangel: Nederlandse Ondernemers in Rusland 1550-1785*, Amsterdam, Balans, 2000.
30. Veluwenkamp Jan Willem, 'Dutch merchants in St. Petersburg in the eighteenth century' // *Tijdschrift voor Skandinavistiek*, 1995, vol. 16.
31. Vrangeli V., *Istorija lesnogo zakonodatel'stva v Rossijskoj imperii s prisovokupleniem očerka istorii korabel'nyh lesov Rossii*, Sankt-Peterburg, 1841.
32. Wallace Daniel, 'Entrepreneurship and the Russian Textile Industry: From Peter the Great to Catherine the Great' // *Russian Review*, 1995, Vol. 54, Nr. 1.
33. Zacharov V.N., 'Inostrannye kupcy v Archangel'ske pri Petre I' // Ju.N. Bospjatyč (red.), *Archangel'sk v XVIII veke*, Sankt-Peterburg: BLIC, 1997.
34. Zacharov Viktor, *Zapadnoevropejskie kupcy v Rossii. Èpocha Petra I*, Moskva: Rossijskaja političeskaja ènciklopedija (ROSSPÈN) 1996.
35. Zacharov Viktor, *Zapadnoevropejskie kupcy v rossijskoj trgovle XVIII veka*, Moskva: Nauka, 2005.

ARCHIVES

Stadsarchief Amsterdam (GAA)

nr. 6: Archive of the Directory Board of Muscovite Trade (DMH), inv. Nrs. 58-61, 123.

nr. 78: Archive of the Directory Board of Baltic Shipping and Trade (DOH), inv. Nrs. 96-99.

Tresoar (Frisian Archives) Leeuwarden

Microfilm copies of the Danish Sound Toll Registers, films nr. 167-209.